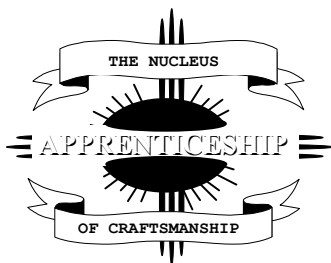




**STANDARDS OF APPRENTICESHIP  
adopted by**

**WESTERN STATES ENGINEERS TRAINING INSTITUTE**

<u>Skilled Occupational Objective(s):</u>	<u>(sponsor)</u>	<u>DOT</u>	<u>Term</u>
CONSTRUCTION EQUIPMENT OPERATORS		859.683-010	8000 HOURS
HEAVY DUTY MECHANIC REPAIRMAN		625.281-010	8000 HOURS
HOISTING ENGINEER		921.663-030	8000 HOURS
TECHNICAL ENGINEER		018.167-018	8000 HOURS



**APPROVED BY**  
**Washington State Apprenticeship and Training Council**  
**REGISTERED WITH**  
**Apprenticeship Section of Specialty Compliance Services Division**  
Washington State Department Labor and Industries  
Post Office Box 44530  
Olympia, Washington 98504-4530

**APPROVAL:**

APRIL 24, 1964

Initial Approval

By: LAFRANK NEWELL

Chairman of Council

JULY 19, 2002

Addendum Amended

By: PATRICK WOODS

Secretary of Council

JULY 19, 2002

Committee Amended

## WESTERN STATES ENGINEERS TRAINING INSTITUTE

NOTE: THE FOLLOWING ADDENDUM SHALL BE SPECIFIED TO THE GROUP JOINT APPRENTICESHIP AND TRAINING COMMITTEE AND ITS CRAFTS:

The Western States Engineers Training Institute is composed of an equal number of representatives from those signatory contractors in the Associated General Contractors of America, Inland Empire Chapter, and the International Union of Operating Engineers, Local #370, Spokane, Washington, working in cooperation with the Washington State Apprenticeship and Training Council, and the Bureau of Apprenticeship and Training, U.S. Department of Labor, have developed the following Standards to provide the best possible training for registered operating engineer apprentices in the area covered by these Standards.

### 1. GEOGRAPHICAL AREA COVERED:

The area covered by these Standards shall be as follows: Counties as parts of counties east of the 120th meridian-Adams, Asotin, Benton, Chelan, Columbia, Douglas, Ferry, Franklin, Garfield, Grant, Kittitas, Lincoln, Okanogan, Pend Orielle, Spokane, Stevens, Walla Walla, Whitman and Yakima in the State of Washington; and all counties in the State of Idaho.

Applicants and apprentices please note that while the State of Washington has no responsibility or authority in the State of Idaho, the JATC will apply the same standards and guidelines to apprentices registered in the program while working in the State of Idaho.

### 2. MINIMUM QUALIFICATIONS:

Age: Not less than eighteen (18) years of age.  
Education: High school graduate or have a G.E.D. Heavy Duty Mechanic Repairman applicants must have previously completed a two year college degree or provide documentation of equivalent training or experience to be eligible for application  
Physical: All applicants shall be physically able to perform the work of the trade. A physical or a physician's evaluation may be required.  
Testing: Upon acceptance, applicants must pass our drug screening criteria. See copy of drug policy.  
Other: All apprenticeship applicants shall have a valid vehicle operator's license and dependable transportation.

### 3. CONDUCT OF PROGRAM UNDER WASHINGTON EQUAL EMPLOYMENT OPPORTUNITY PLAN:

A. Selection Procedures:

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All individuals interested in becoming an apprentice must complete the eight (8) week Safety and Orientation class. The standard tuition fee will be charged to all individuals who participate in this class.

Selection into this program is a two-step process, first, an applicant must be successfully accepted into the Safety and Orientation class, and secondly, applicants will be placed into the apprenticeship program based on their performance in this class. The apprenticeship program will keep a detailed applicant log. This log will track each applicant's progress through the selection process.

If, for the Safety and Orientation class, there are more applicants who meet the minimum qualifications and provided they pay the required tuition fee, than there are slots available, all applicants will be interviewed. If there are slots available for all eligible applicants, the interviews can be bypassed and all of the eligible applicants may advance to the Safety and Orientation class. When interviews are necessary, all interviewed applicants will be scored on a point-based system. The highest scoring applicants will be selected for the available openings in the Safety and Orientation class.

The Safety and Orientation class is an eight (8) week - 320 hour-long program. While in this program, each individual will be evaluated weekly by their instructors for attendance, attitude, safety and school performance. Each applicant's weekly evaluations will be totaled at the end of the Safety and Orientation program.

A ranked list of the individuals who have completed the Safety and Orientation class will be created. Each individual will be placed on this list based on their overall total score achieved while in the Safety and Orientation class. This ranked list will constitute the eligible apprenticeship pool list. Individuals will be dispatched from this list in proper chronological order.

### **B. Affirmative Action Plan:**

1. Participation in annual workshops, if available, designed to familiarize all concerned with the apprenticeship system and current opportunities.
2. Cooperate with school boards and vocational schools to develop programs, which prepare students for entrance into apprenticeship.
3. Engage in such programs as OUTREACH for the positive recruitment and preparation of potential applicants for apprenticeship; where appropriate and feasible, such programs

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shall provide for pre-testing experience and training. If no programs are in existence, the sponsor shall seek to initiate these programs, or, when available, to obtain financial assistance from the Council. In initiating and conducting these programs, the sponsor may be required to work with other sponsors and appropriate community organizations. The Sponsor shall also initiate programs to prepare women and encourage women to enter the traditionally male programs.

4. To encourage the establishment and utilization of programs of pre-apprenticeship, preparatory trade training, or others designed to afford related work experience or to prepare candidates for apprenticeship, a sponsor shall make appropriate provisions in its affirmative action plan to insure that those who complete such programs are afforded full and equal opportunity for admission into the apprenticeship program.
5. Engage in any such action as stated above to insure that recruitment, selection, employment, and training of apprentices without during apprenticeship shall be without discrimination because of race, color, religion, national origin, or sex.
6. Direct referral into apprenticeship openings of Operating Engineers Job Corps graduates successfully completing a specific trade pre-apprenticeship Operating Engineers Job Corps program, without regard to present eligibility lists. Additional Safety and Orientation Training will be required by the Operating Engineers.

### 4. TERM OF APPRENTICESHIP:

- A. Heavy Duty Mechanic Repairman: 8000 hours of work experience
- B. Construction Equipment Operator: 8000 hours of work experience.
- C. Technical Engineer: 8000 hours of work experience.
- D. Hoisting Engineer: 8000 hours of work experience.

### 5. PROBATIONARY PERIOD:

All apprenticeships shall be subject to a tryout or probationary period not exceeding the first 1600 hours of employment.

### 6. RATIO OF APPRENTICES:

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- A. Heavy Duty Mechanic Repairmen: An employer employing one (1) or more journeymen in the trade of heavy duty mechanic repairman at the job site may employ one (1) apprentice and one (1) additional apprentice shall be employed thereafter for each three (3) journeymen employed at the job site or shop.
  - B. Construction Equipment Operators: An employer employing one (1) or more journeymen in the trade of construction equipment operator at the job site may employ one (1) apprentice and one (1) additional apprentice shall be employed thereafter for each three (3) journeymen employed at the job site.
  - C. Technical Engineer: An employer employing one (1) or more journeymen in the trade of technical engineer at the job site may employ one (1) apprentice and one (1) additional apprentice shall be employed thereafter for each three (3) journeymen employed at the job site.
  - D. Hoisting Engineer: An employer employing one (1) or more journeymen in the trade of hoisting engineer at the job site may employ one (1) apprentice and one (1) additional apprentice may be employed for each three (3) journeymen employed at the job site.
7. WAGE PROGRESSION:  
Apprentices shall be paid on the following percentage basis in accordance with WAC 296-04-270(2)(c):
- 1st 1000 hours 55% of the journeyman rate
  - 2nd 1000 hours 60% of the journeyman rate
  - 3rd 1000 hours 65% of the journeyman rate
  - 4th 1000 hours 70% of the journeyman rate
  - 5th 1000 hours 75% of the journeyman rate
  - 6th 1000 hours 80% of the journeyman rate
  - 7th 1000 hours 85% of the journeyman rate
  - 8th 1000 hours 90% of the journeyman rate

### Rates:

- A. Heavy Duty Mechanic Repairmen:  
The rates for the heavy-duty mechanic repairmen for the field rate shall be based on the field heavy-duty mechanic-welder journeyman wage rate under Schedule A, Group VI, established in the Collective Bargaining Agreement. The shop rates for the heavy-duty mechanic repairman shall be based on the journeyman shop heavy-duty mechanic-welder wage rate under Schedule B established in the Collective Bargaining Agreement.
- B. Construction Equipment Operators:

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The rates for the construction equipment operators shall be based on the journeyman wage rate under Schedule A, Group VI, (Tractors D-6 & over) established in the Collective Bargaining Agreement.

C. Technical Engineer:

The rates for the technical engineers shall be based on the journeyman wage rate under Schedule A, Group VI, (Tractors D-6 & over) established in the Collective Bargaining Agreement.

D. Hoisting Engineer:

The rates for the hoisting engineer shall be based on the journeyman wage rate under Schedule A, Group VI (Tractors D-6 and over), established in the Collective Bargaining Agreement.

Apprentices shall receive the same travel pay and health insurance accorded to journeymen.

Apprentices shall receive pension benefits after completion of the 1600-hour probationary period. For projects bid at 90% refer to collective bargaining agreement for Operating Engineers.

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### 8. WORK PROCESSES:

The operating engineer apprentices shall receive the instruction and experience necessary to develop a practical and skilled journeyman versed in the theory and practice of his/her particular trade classification by using the following appropriate schedule of work experience as a guide. He/she shall also perform such other duties as are commonly related to his/her classification.

A.	<u>Heavy Duty Mechanic Repairmen:</u>	<u>D.O.T. #625.281-010</u>	<u>Hours</u>
1.	Preventative maintenance and service ..... (Which shall include the following training categories)		1500
	a. Lubes, oils and fuels		
	b. Greasing and oiling		
	c. Cleaning and inspecting parts		
	d. Minor adjustments		
	e. Testing, trouble shooting of equipment		
	f. Welding, cutting, and fabrication		
2.	Engines ..... (Which shall include the following training categories)		1500
	a. Operation, maintenance, and repair of diesel, gasoline, steam engines with attached drive units such as air compressors, water pumps, ac/dc generators, and electric motors.		
	b. Repair of air systems and troubleshooting		
	c. Repair of fuel systems and troubleshooting		
	d. Repair of lubrication systems and troubleshooting		
	e. Repair of cooling systems and troubleshooting		
	f. Repair of engine braking systems and troubleshooting		
	g. Repair of electrical starting and charging systems and troubleshooting.		
3.	Power trains ..... (Which shall include the following training categories)		1500
	a. Wet and dry clutches		
	b. Standard transmissions		
	c. Torque converters		
	d. Power shift transmissions		
	e. Electric drives and traction motors		
	f. Drive lines		
	g. Differentials - final drives		
	h. Frictions and steering clutches		
	i. Brakes, (air-hydraulic, electric, mechanical)		

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- j. Tires, wheels, and hubs
  - k. Under-carriage and tracks
  - l. Cabs, bodies, and frames
  - m. Booms, drums, sheaves, buckets, and cables
4. Control systems .....1500  
(Which shall include following training categories)
- a. Mechanical levers
  - b. Cable
  - c. Hydraulics
  - d. Air
  - e. Electrical (and combination thereof)
  - f. Instrument panels
  - g. Switch gear
  - h. Valves
  - i. Solenoids
5. Machine Control .....2000
- a. Installation of Components Control Box, Mainfall, Rotation and Blade Sensors
  - b. Calibration of mainfall, rotation and blade sensors
  - c. Maintenance of Machine Control Components.
  - d. Electrical Systems Installation.
  - e. Hydraulic Systems Installation.
  - f. Laser Applications and Installations.
  - g. Sonar Applications and Installations.
  - h. Installation of Light Displays.

**TOTAL HOURS:**

**8000**

ALL THE FOREGOING WORK EXPERIENCE AS HEREIN NOTED IS UNDERSTOOD TO MEAN AS IT PERTAINS TO THE TRADE HEREIN INVOLVED IN THESE STANDARDS.

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B.	<u>Construction Equipment Operators: D.O.T. #859.683-010</u>	<u>Hours</u>
1.	<p>Track type equipment.....</p> <p>(Which shall include the following training categories)</p> <ul style="list-style-type: none"><li>a. Dozers</li><li>b. Pushcarts</li><li>c. Track type loaders</li><li>d. Track type backhoes</li><li>e. Track type paving machines concrete and asphalt</li><li>f. Track type trenching equipment</li><li>g. Screeds</li></ul> <p>To include all attachments and support equipment: Lubrication, grades and stakes, signals, soils, and compaction.</p>	1500
2.	<p>Rubber tire type equipment.....</p> <p>(Which shall include the following training categories)</p> <ul style="list-style-type: none"><li>a. Scrapers</li><li>b. Rubber tire loaders</li><li>c. Motor graders</li><li>d. Truck-tractor and trailers</li><li>e. Rubber tire dozers</li><li>f. Rubber tire backhoes</li><li>g. Rubber tired asphalt, dirt and/or any compactor roller</li><li>h. Combination backhoe-loaders</li><li>i. Rubber tire trenchers</li><li>j. Rubber tired paving machines</li><li>k. Brooms</li></ul> <p>To include all attachments and support equipment: Lubrication, grades, and stakes, signals, soils and compaction.</p>	1500
3.	<p>Lifting Type Equipment .....</p> <p>(Which shall include the following training categories)</p> <ul style="list-style-type: none"><li>a. Forklifts</li><li>b. Pavement Breakers</li><li>c. Boom Trucks</li><li>d. A-Frames</li><li>e. Chicago Booms</li><li>f. Air Tuggers</li><li>g. Other self-propelled lifting devices.</li></ul>	1500

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To include all attachments and support equipment:  
Lubrication grades, and stakes, signals, soils and  
compaction.

- 4. Stationary and miscellaneous type equipment..... 1500  
(Which shall include the following training categories)
  - a. All asphalt plants
  - b. Crusher plants
  - c. Washing and screening plants
  - d. Concrete plants and supportive equipment
  - e. Concrete pumps
  - f. Concrete saws
  - g. Set up-tear down, welding, cutting, fabrication
  - h. Lubrication and preventative maintenance
  - i. Power generating plants
  
- 5. Machine Control .....2000  
(Which shall include the following training categories)
  - a. Calibration of lasers.
  - b. Laser operation and application.
  - c. Installation of sonar tracers.
  - d. Operation of sonar tracers.
  - e. Calibration of components mainfall, rotation and blade sensors.
  - f. Functions of control box.
  - g. Operation and setup of light displays.
  - h. Field setup procedures for machine control operations.

**TOTAL HOURS: 8000**

To include all attachments and support equipment: Set up, tear down, lubrication, and preventative maintenance, grades and stakes, signals, soils and compaction

ALL THE FOREGOING WORK EXPERIENCE AS HEREIN NOTED IS  
UNDERSTOOD TO MEAN AS IT PERTAINS TO THE TRADE HEREIN  
INVOLVED IN THESE STANDARDS.

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C.	<u>Technical Engineers:</u>	<u>D.O.T. #018.167-018</u>	<u>Hours</u>
1.	Periods I, II; chainman/rodman apprentice.....		3000
	a. Use and care of hand tools (other than survey equipment)		
	b. Use and care of survey hand tools		
	c. Use and care of rods, chains, etc.		
	d. Hand signals		
	e. Marker stakes		
	f. Hubs, points and monuments		
	g. Bench marks and turning points		
	h. First aid		
	i. Safety measures		
2.	Period III, IV, instrumentman/party chief .....		3000
	a. Use and care of levels		
	b. Use and care of alidades and other special instruments		
	c. Notes and sketches		
	d. Calculations, reductions, conversions		
	e. Maps, plans, records, etc.		
	f. Job analysis for efficient field procedures		
	g. Supervise survey party		
3.	Period V, Advanced Technologies .....		2000
	a. Laser Calibration		
	b. Laser Operation		
	c. Electronic Distance Meters		
	d. GPS Satellite Systems		
	e. Smart Stik Computerized Grade Rods		
	f. Computer Earthwork Estimating Systems		
<b>TOTAL HOURS:</b>			<b>8000</b>

ALL THE FOREGOING WORK EXPERIENCE AS HEREIN NOTED IS UNDERSTOOD TO MEAN AS IT PERTAINS TO THE TRADE HEREIN INVOLVED IN THESE STANDARDS.

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D.	<u>Hoisting Engineer:</u>	<u>D.O.T. #921.663-030</u>	<u>Hours</u>
1.	Rigging and Transporting.....		3000
	a. Rigging the load		
	b. Signaling the load		
	c. Pre-operational checks		
	d. Transporting, erecting and dismantling the crane		
2.	Crane Operation and Maintenance .....		3000
	a. Operating the crane		
	b. Inspecting the crane		
	c. Maintaining the crane		
	d. Repairing the crane		
3.	Compliance, Rules and Regulations .....		2000
	a. Maintaining the log book		
	b. Rules and regulations		
	c. Working near power lines		
	d. Working the crane in hazardous awareness area's		

To include all attachments and support equipment; clam shell, draglines, pile drivers, boom extensions and jibs.

<b>TOTAL HOURS:</b>	<b>8000</b>
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ALL THE FOREGOING WORK EXPERIENCE AS HEREIN NOTED IS UNDERSTOOD TO MEAN AS IT PERTAINS TO THE TRADE HEREIN INVOLVED IN THESE STANDARDS.

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### 9. RELATED/SUPPLEMENTAL INSTRUCTION:

- A. Each apprentice shall enroll in and attend classes in subjects related to this trade as approved by the State Board for Community and Technical Colleges, for a minimum of 200 hours per year.
- B. The methods of related/supplemental training shall consist of one or more of the following:
  - (X) Supervised field trips
  - (X) Approved training seminars
  - (X) A combination of home study and approved correspondence courses
  - (X) Technical college
  - (X) Community college
  - (X) Training trust
  - ( ) Other (specify)
- C. Hours 200
- D. Satisfactory progress must be maintained in related training classes. (See section 10, Administrative/Disciplinary Procedures.)
- E. Each apprentice shall complete the 200 hours of related training per year.
- F. The Apprenticeship Committee recommends that the courses for apprenticeship be limited to those who are actually apprentices to the trade in accordance with these Standards.
- G. Apprentice shall not be allowed more than three (3) Unexcused Absences per instructional calendar year. An Excused Absence is the Apprentice working with a written excuse from the employer, or the Apprentice sick with a written excuse from the doctor. Disciplinary action shall be an explanation to the Joint Apprenticeship Training Committee of why Apprentice could not attend. Such disciplinary action may result in probation, suspension, or cancellation of the Apprenticeship Agreement.

### 10. ADMINISTRATIVE/DISCIPLINARY PROCEDURES:

#### Administrative Procedures:

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- A. The progress and growth of the building, heavy, highway and engineering construction have created a need for a variety of large and costly equipment. To operate this equipment likewise requires a variety of skills. The source of this skill is the operating engineer.

To efficiently operate and maintain this large and costly equipment, the operator must have a thorough knowledge of the capabilities of the equipment. Much of the work performed by these machines is done to close tolerances calling for the utmost skill in their operations. With the constant introduction of new equipment and materials into the industry, the operator has to keep abreast with the changing skills and methods of operation. The operator must also be able to make minor adjustments and repairs to his/her machine and understand its servicing procedure. The above equipment must have preventative maintenance as well as scheduled maintenance. The mechanic must be able to diagnose, repair and maintain this equipment. Labor and Management have adopted the apprenticeship system as a means of providing a continuing supply of highly skilled operating engineers for all branches of this industry.

- B. Hiring of Apprentices:

Employers desiring an apprentice shall make request for said apprentice to the Apprenticeship Committee or their designated authority.

- C. Any apprentice may be rotated from employer to employer or job site to job site by the Apprenticeship Committee or designated authority.

- D. Processing of applications:

1. All applications are obtained, processed and filed at the office of the Apprenticeship and Training Coordinator.
2. A log shall be kept in the training director's office, indicating the number of each application, logged to the left hand column of each applicant's name. The date application is returned and accepted is displayed on the right side of the applicant's name in the log.
3. Interested persons are encouraged to obtain application in person.
4. The following information shall be recorded with each application.
  - a. Date application is obtained
  - b. Date aptitude test results are received
  - c. Date proof of age and education is displayed
  - d. Results of interview

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5. Application is void after two (2) years, and those interested must reapply.

### E. Periodic Evaluation and Record Books:

Each apprentice, upon indenture, shall be furnished with a "Record Book"; the apprentice must faithfully keep this record, which shall be verified at the end of each month by the foreman or the journeyman supervising the apprentice. An evaluation of the apprentice shall be made each 1000 hours by the Apprenticeship Committee to determine his/her eligibility to receive the scheduled increase in his/her rate of pay. In these examinations consideration shall be made of school attendance, progress and daily employment record of the apprentice.

This record must be submitted to the training director's office no later than the 10th of the following month, regardless if apprentice is working or not. The Apprenticeship Committee shall have the authority to withhold advancement, suspend or cancel his/her Agreement for failure to comply. The apprentice, the employer and the union agree to abide by any such determination of the Committee.

### F. Disciplinary Procedures:

1. The basic work day and work week for apprentices shall be the same as that of a journeyman and the apprentices shall be subject to the same conditions including, but not limited to, accepted work rules pertaining to all safety codes, refusing employment as offered, dependability and reliability, extensive tardiness or absenteeism. Upon proper and legal review by the Apprenticeship Committee, the apprentice may be canceled from the Apprenticeship Program for failure to abide by these work rules. At no time will an apprentice be permitted to work without being under the supervision of a journeyman of their trade, nor shall he/she act as a foreman.
2. Substance Abuse Testing: The Apprenticeship Committee shall have the authority to adopt a drug and alcohol testing program in order to ensure that each apprentice can work safely in a drug and alcohol free environment. Each apprentice agrees to be subject to such testing as a condition for maintaining his or her apprenticeship agreement.

## 11. COMPOSITION OF COMMITTEE AND ALTERNATES:

## WESTERN STATES ENGINEERS TRAINING INSTITUTE

The Apprenticeship Committee shall be composed of equal numbers of members representing both the International Union of Operating Engineers, Local #370, and the Inland Empire Chapter Associated General Contractors of America.

### The Employer Representatives Shall Be:

Gary Hite, Chairman  
E 4323 Broadway  
Spokane, WA 99212

Paul Parish  
Box 6510  
Kennewick, WA 99336

Monty Hines  
Box 1050  
Richland, WA 99352

Jack Monrean  
3350 George Washington Way  
Richland, WA 99352

### The Employee Representatives Shall Be:

Curt Koegen, Secretary  
PO Box 3386 T.A.  
Spokane, WA 99220

Mike Mitchell  
2015 West Yakima  
Pasco, WA 99301

Brian Hogan  
722 West 100 North  
Blackfoot, ID 83221

Jerry Stephenson  
PO Box 3386 T.A.  
Spokane, WA 99220

12. SUBCOMMITTEE: (None)

13. TRAINING DIRECTOR/COORDINATOR:

Danny Thiemens  
23500 S Operating Engineers Lane  
PO Box 210  
Spangle, WA 99031-0210